

Cal/Ecotox

Toxicity Data for American Kestrel (*Falco sparverius*)*

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Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
ACEPHATE; DDE (4,4')	50 mg acephate/kg bw +/- 6 ppm DDE (wet wt)	TOX-EXP IND - biomarkers	median serum cholinesterase activity 24 hr post-dose	decrease for both treatments	a	1
ACEPHATE; DDE (4,4')	50 mg acephate/kg bw +/- 6 ppm DDE (wet wt)	TOX-Non-Repro-Sublethal - behavioral effects	prey capturing behavior	no effect	b	1
AROCLOR 1248	0, 3.0 ug/g, wet wt	TOX-EXP IND - accumulation	mean carcass concentrations, wet wt	18.5 ug/g (5.1SD), PCBs; 0.10 ug/g (0.03 SD), dieldrin; 1.02 ug/g (0.39 SD), DDE @ 3.0 ug/g	c	2
AROCLOR 1248	0, 3.0 ug/g, wet wt	TOX-EXP IND - accumulation	mean egg concentrations, wet wt	5.60 ug/g (1.15 SD), PCBs; 0.15 ug/g (0.05 SD), dieldrin; 0.15 ug/g (0.07 SD), DDE @ 3.0 ug/g	d	2
AROCLOR 1248	0, 3.0 ug/g, wet wt	TOX-REPRO - physiology	mean eggshell thickness	5% decrease @ 3.0 ug/g	e	2
AROCLOR 1254	0, 7 mg/kg/d	TOX-Non-Repro-Sublethal - organ/system effects	aminopyrine N-demethylase and aldrin epoxidase activities versus controls	increased after 4 or 12 weeks	f	3
AROCLOR 1254	0, 7 mg/kg/d	TOX-Non-Repro-Sublethal - organ/system effects	liver ethoxyresorufin-O-deethylase activity versus controls	decreased after 4 weeks	g	3
AROCLOR 1254	0 and 33 ppm, wet weight (=9-10 mg/kg bw/d)	TOX-REPRO - physiology	sperm concentration	21.5-22.6% decrease @ 33 ppm	h	4
AROCLOR 1254	0 and 33 ppm, wet weight (=9-10 mg/kg bw/d)	TOX-REPRO - physiology	sperm motility	no effect	i	4
AROCLOR 1254; MIREX	0 and 8 ppm mirex + 33 ppm Aroclor, wet weight	TOX-REPRO - physiology	semen volume	73.3% increase @ 8ppm mirex + 33 ppm Aroclor	j	4
AROCLOR 1254; MIREX	0 and 8 ppm mirex + 33 ppm Aroclor, wet weight	TOX-REPRO - physiology	sperm concentration	20.3% decrease @ 8 ppm mirex + 33 ppm Aroclor	k	4
AROCLOR 1254; MIREX	0 and 8 ppm mirex + 33 ppm Aroclor, wet weight	TOX-REPRO - physiology	sperm motility	no effect	l	4
AROCLOR 1254; PCB 126 (3,3',4,4',5-PENTACHLOROBIPHENYL); PCB 153 (2,2',4,4',5,5'-HEXACHLOROBIPHENYL); PCB 77 (3,3',4,4'-tetrachlorinated biphenyl)	0; 250 mg/kg bw (PCB 77 or PCB 153); 25 mg/kg bw (PCB 126); 100, 250 or 500 mg/kg bw (Aroclor 1254)	TOX-Non-Repro-Sublethal - organ/system effects	coproporphyrin levels in liver versus controls	increased with Aroclor 1254	m	3
AROCLOR 1254; PCB 126 (3,3',4,4',5-PENTACHLOROBIPHENYL); PCB 153 (2,2',4,4',5,5'-HEXACHLOROBIPHENYL); PCB 77 (3,3',4,4'-tetrachlorinated biphenyl)	0; 250 mg/kg bw (PCB 77 or PCB 153); 25 mg/kg bw (PCB 126); 100, 250 or 500 mg/kg bw (Aroclor 1254)	TOX-Non-Repro-Sublethal - organ/system effects	liver ethoxyresorufin-O-deethylase activity versus controls	increased with PCB 77	n	3
AROCLOR 1254; PCB 126 (3,3',4,4',5-PENTACHLOROBIPHENYL); PCB 153 (2,2',4,4',5,5'-HEXACHLOROBIPHENYL); PCB 77 (3,3',4,4'-tetrachlorinated biphenyl)	0; 250 mg/kg bw (PCB 77 or PCB 153); 25 mg/kg bw (PCB 126); 100, 250 or 500 mg/kg bw (Aroclor 1254)	TOX-Non-Repro-Sublethal - organ/system effects	liver ethoxyresorufin-O-deethylase activity versus controls	decreased with PCB 153	o	3
AROCLOR 1254; PCB 126 (3,3',4,4',5-PENTACHLOROBIPHENYL); PCB 153 (2,2',4,4',5,5'-HEXACHLOROBIPHENYL); PCB 77 (3,3',4,4'-tetrachlorinated biphenyl)	0; 250 mg/kg bw (PCB 77 or PCB 153); 25 mg/kg bw (PCB 126); 100, 250 or 500 mg/kg bw (Aroclor 1254)	TOX-Non-Repro-Sublethal - organ/system effects	liver ethoxyresorufin-O-deethylase activity versus controls	increased with PCB 126	p	3

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AROCLOL 1254; PCB 126 (3,3',4,4',5-PENTACHLOROBIPHENYL); PCB 153 (2,2',4,4',5,5'-HEXACHLOROBIPHENYL); PCB 77 (3,3',4,4'-tetrachlorinated biphenyl)	0; 250 mg/kg bw (PCB 77 or PCB 153); 25 mg/kg bw (PCB 126); 100, 250 or 500 mg/kg bw (Aroclor 1254)	TOX-Non-Repro-Sublethal - organ/system effects	liver weight (as percent of body weight) versus controls	increased with PCB 77	q	3
AROCLOL 1254; POLYCHLORINATED DIBENZO-P-DIOXINS	0, 5 ppm, wet wt	TOX-Non-Repro-Sublethal - cellular/biochemical effects	amount of liver cytoplasmic RNA	increased @ 5 ppm	r	5
AROCLOL 1254; POLYCHLORINATED DIBENZO-P-DIOXINS	0, 0.5, 5 ppm, wet wt	TOX-Non-Repro-Sublethal - cellular/biochemical effects	in vitro microsomal breakdown of oestradiol	increased @ 0.5, 5 ppm	s	5
AROCLOL 1262; POLYCHLORINATED DIBENZO-P-DIOXINS	0, 0.5, 5 ppm, wet wt	TOX-Non-Repro-Sublethal - cellular/biochemical effects	in vitro microsomal breakdown of oestradiol	increased @ 0.5, 5 ppm	t	5
CARBOFURAN	0.23 kg/305 m application	TOX-EXP IND - accumulation	carcass residues of kestrels found dead	1.7-7.4 ppm (wet wt)	u	6
CARBOFURAN	0,31.7,63.4,126.8,253.6 ppm in diet	TOX-MORT - dose-response data	mortality versus controls	increased at 63.4, 126.8, 253.6 ppm	v	7
CARBOFURAN	0.23 kg/305 m application	TOX-MORT - mortality in the field	number of dead kestrels found on treated fields	3	w	6
CARBOFURAN	0.3-1.8 mg/kg bw	TOX-MORT - toxicity benchmarks	LD50	0.6 mg/kg bw (0.5-1.0 95% CI)	x	8
CARBOFURAN	0,31.7,63.4,126.8,253.6 ppm in diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain cholinesterase activity in birds that died	decreased to 35% of controls	y	7
CARBOFURAN	0.3-1.8 mg/kg bw	TOX-Non-Repro-Sublethal - cellular/biochemical effects	mean brain cholinesterase depression (relative to control) in birds that died in 8 hrs post-dose	83% (4.3 SD)	z	8
CRUDE OILS	0, 0.3, 3.0% diet	TOX-Non-Repro-Sublethal - behavioral effects	food consumption	increased @ 3.0%	aa	9
CRUDE OILS	0, 0.3, 3.0% diet	TOX-Non-Repro-Sublethal - organ/system effects	hemoglobin	decreased @ 3.0%	ab	9
CRUDE OILS	0, 0.3, 3.0% diet	TOX-Non-Repro-Sublethal - organ/system effects	various hematological measurements (packed cell volume, erythrocyte counts, plasma uric acid, plasma alanine aminotransferase)	no effect	ac	9
CRUDE OILS	0, 0.3, 3.0% diet	TOX-Non-Repro-Sublethal - whole animal	body weight	decreased @ 3.0%	ad	9
CYANIDE, SODIUM	NR	TOX-MORT - dose-response data	LD50	4.0 mg/kg bw	ae	10
DDE (4,4')	10 ppm (dry wt)	TOX-EXP IND - accumulation	brain residues in birds that died	984.1-1438.6 ppm (dry wt)	af	11
DDE (4,4')	10 ppm (dry wt)	TOX-EXP IND - accumulation	liver residues in birds that died	507-877.1 ppm (dry wt)	ag	11
DDE (4,4')	10 ppm (dry wt)	TOX-EXP IND - accumulation	mean brain residues in birds that survived	232.9 ppm (dry wt)	ah	11
DDE (4,4')	0.009 mg/kg plant; 0.343 mg/kg soil; 0.605 mg/kg worm; 0.016 mg/kg vole	TOX-EXP IND - accumulation	mean DDE concentration in eggs (pooled analyses)	5.53 mg/kg egg (wet wt)	ai	12
DDE (4,4')	6 ppm (wet wt)	TOX-EXP IND - accumulation	mean DDE concentration in blood (wet wt)	1.37 (0.10 SE) mg/kg	aj	13

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DDE (4,4')	10 ppm (dry wt)	TOX-EXP IND - accumulation	mean liver residues in birds that survived	88.1 ppm (dry wt)	ak	11
DDE (4,4')	0, 10 ppm (dry wt)	TOX-EXP IND - accumulation	mean residues in eggs	0.71 (0.05 SE) ppm at 0 ppm, 32.4 (2.78 SE) ppm at 10 ppm	al	14
DDE (4,4')	6 ppm (wet wt)	TOX-Non-Reproto-Sublethal - behavioral effects	variance in kestrel response time to prey stimulus	no effect	am	13
DDE (4,4')	6 mg/kg bw/d	TOX-REPRO - physiology	Calcium ATPase activity of shell gland	decrease	an	15
DDE (4,4')	6 mg/kg bw/d	TOX-REPRO - physiology	calcium concentration in blood	no effect	ao	15
DDE (4,4')	6 mg/kg bw/d	TOX-REPRO - physiology	carbonic anhydrase activity of shell gland	decrease	ap	15
DDE (4,4')	6 mg/kg bw/d	TOX-REPRO - physiology	eggshell thickness	decrease	aq	15
DDE (4,4')	0, 0.3, 3, 6, 10 ppm (wet wt)	TOX-REPRO - physiology	eggshell thickness	decrease at all doses (15.1-29.2%)	ar	16
DDE (4,4')	33.2-41.9 ppm (dry wt) in eggs	TOX-REPRO - physiology	eggshell thickness change relative to control	10% decrease	as	17
DDE (4,4')	0, 10 ppm (dry wt)	TOX-REPRO - physiology	mean eggshell thickness	decrease at 10 ppm	at	14
DDE (4,4')	0, 3 ppm	TOX-REPRO - physiology	mean eggshell thickness	decrease at 3 ppm	au	18
DDE (4,4'); DIELDRIN; HEPTACHLOR EPOXIDE; OXYCHLORDANE; POLYCHLORINATED BIPHENYLS	0.17-12.0 (DDE), 0.61-6.55 (PCBs), 0.08-5.17 (heptachlor epoxide), 1.97-5.15 (oxychlordane), 0.38-3.26 (trans-nonachlor), 0.75-3.70 (dieldrin) wet wt in brain	TOX-MORT - mortality in the field	occurrence of wild birds dying diagnosed with organochlorine poisoning	increased	av	19
DDE (4,4'); DIELDRIN; LEAD COMPOUNDS	38 lead, 48 DDE, 1.2 dieldrin ppm (wet wt) in voles	TOX-EXP IND - accumulation	DDE concentration in carcass	232 (9 SE) ppm (wet wt)	aw	20
DDE (4,4'); DIELDRIN; LEAD COMPOUNDS	38 lead, 48 DDE, 1.2 dieldrin ppm (wet wt) in voles	TOX-EXP IND - accumulation	DDE concentration in brain	10.4 (0.6 SE) ppm (wet wt)	ax	20
DDE (4,4'); DIELDRIN; LEAD COMPOUNDS	38 lead, 48 DDE, 1.2 dieldrin ppm (wet wt) in voles	TOX-EXP IND - accumulation	lead concentration in liver	1.05 (0.05 SE) ppm (wet wt)	ay	20
DDE (4,4'); DIELDRIN; LEAD COMPOUNDS	38 lead, 48 DDE, 1.2 dieldrin ppm (wet wt) in voles	TOX-EXP IND - accumulation	lead concentration in tibia	0.70 (0.20 SE) ppm (wet wt)	az	20
DDE (4,4'); DIELDRIN; LEAD COMPOUNDS	38 lead, 48 DDE, 1.2 dieldrin ppm (wet wt) in voles	TOX-Non-Reproto-Sublethal - whole animal	bw (versus pre-study bw)	decreased	ba	20
DDT (Technical Grade Mixture)	0.75 lb/ac application	TOX-EXP IND - accumulation	mean DDT concentration in eggs 0-0.8 mi from sprayed area	6.42 ppm	bb	21
DDT (Technical Grade Mixture)	0.75 lb/ac application	TOX-EXP IND - accumulation	mean DDT concentration in plasma of birds sampled 0-1.5 mi from sprayed area	0.78 ppm	bc	21
DDT (Technical Grade Mixture)	0.75 lb/ac application	TOX-REPRO - physiology	change in mean eggshell thickness (relative to control) 0-0.8 miles from sprayed area	10.4% decrease	bd	21
DDT (Technical Grade Mixture)	0.75 lb/ac application	TOX-REPRO - reproductive success	mean productivity (young produced)	no effect	be	21
DICOFOL	0.5,20 mg/kg bw	TOX-EXP IND - accumulation	mean concentration of metabolite dichlorobenzophenone in eggs	non-detectable (@ 5 mg/kg), 560 ng/g (@ 20 mg/kg)	bf	22

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DICOFOL	0, 0.3, 3.0 mg/kg bw/d	TOX-EXP IND - accumulation	sum of geometric mean tissue concentrations (wet wt) of dicofol and metabolites (dichlorobenzophenone, mono-dechlorinated dicofol, dichlorobenzhydrol, DDE)	8.11 (fat), 0.28 (liver) ug/g @ 0.3 mg/kg bw/d	bg	23
DICOFOL	0, 0.3, 3.0 mg/kg bw/d	TOX-EXP IND - accumulation	sum of geometric mean tissue concentrations (wet wt) of dicofol and metabolites (dichlorobenzophenone, mono-dechlorinated dicofol, dichlorobenzhydrol, DDE)	82.36 (fat), 4.93 (liver), 1.15 (brain), 0.84 (oviduct) ug/g @ 3.0 mg/kg bw/d	bh	23
DICOFOL	0.5,20 mg/kg bw	TOX-REPRO - behavior	incidence of abnormal behavior in adult offspring of treated females	increased	bi	24
DICOFOL	0.5,20 mg/kg bw	TOX-REPRO - development	incidence of abnormal embryonic gonads	increased @ 5 and 20 mg/kg	bj	22
DICOFOL	0.5,20 mg/kg bw	TOX-REPRO - development	incidence of abnormal gonads in male offspring of dicofol-treated females versus controls	increased @ 5 mg/kg bw	bk	22
DICOFOL	0.5,20 mg/kg bw	TOX-REPRO - development	numbers of chicks or eggs lost (destroyed) by breeding male and female offspring of dicofol-treated females versus controls	increased @ 5 mg/kg	bl	22
DICOFOL	0.5,20 mg/kg bw	TOX-REPRO - physiology	eggshell thickness compared to controls	decreased 5.45% (@ 5 mg/kg), 10.98% (@ 20 mg/kg)	bm	22
DICOFOL	0.5,20 mg/kg bw	TOX-REPRO - physiology	eggshell thickness for breeding female offspring of dicofol-treated females versus controls	no effect	bn	22
DIMETHYLMERCURY	0, 10 ppm	TOX-REPRO - physiology	eggshell thickness	no effect	bo	25
EPN	2.2-11 mg/kg bw	TOX-MORT - toxicity benchmarks	LD50	4.0 mg/kg bw (3.1-5.1 95% CI)	bp	8
EPN	2.2-11 mg/kg bw	TOX-Non-Repro-Sublethal - cellular/biochemical effects	mean brain cholinesterase depression (relative to control) in birds that died in 8 hrs post-dose	68% (10.0 SD)	bq	8
FENTHION	1.1-6.1 ug/g sparrow	TOX-EXP IND - biomarkers	range of plasma cholinesterase inhibition (relative to control) in birds that died	96%	br	26
FENTHION	1.1-6.1 ug/g sparrow	TOX-MORT - dose-response data		100%	bs	26
FENTHION	0,23.6,47.2,94.5,189.0 ppm in diet	TOX-MORT - dose-response data	mortality versus controls	increased @ all doses	bt	7
FENTHION	0.5-2.4 mg/kg bw	TOX-MORT - toxicity benchmarks	LD50	1.4 mg/kg bw	bu	8
FENTHION	0,23.6,47.2,94.5,189.0 ppm in diet	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain cholinesterase activity of birds that died	decreased to 10% of control levels	bv	7
FENTHION	0.5-2.4 mg/kg bw	TOX-Non-Repro-Sublethal - cellular/biochemical effects	mean brain cholinesterase depression (relative to control) in birds that died in 8 hrs post-dose	88% (2.7 SD)	bw	8
FENTHION	1.1-6.1 ug/g sparrow	TOX-Non-Repro-Sublethal - cellular/biochemical effects	range of brain acetylcholinesterase inhibition (relative to control) in birds that died	77.9-92%	bx	26
FLUORIDE, SODIUM	0, 1120, 2240 ppm fluoride	TOX-EXP IND - accumulation	mean fluoride content in the diaphyses of femurae	247.0 +/- 103.1 ppm @ 0 ppm; 6137.9 +/- 823.8 ppm @ 1120 ppm; 10,272.6 +/- 865.8 ppm @ 2240 ppm	by	27

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FLUORIDE, SODIUM	0, 1120, 2240 ppm fluoride	TOX-REPRO - development	% bone ash	increased at 1120, 2240 ppm	bz	27
FLUORIDE, SODIUM	0, 1120, 2240 ppm fluoride	TOX-REPRO - development	bonebreaking strength	decreased at 2240 ppm	ca	27
FLUORIDE, SODIUM	0, 1120, 2240 ppm fluoride	TOX-REPRO - development	growth of body weight and skeletal components (skull, bill, tarsus, antebrachium, and manus)	no effect	cb	27
LEAD (elemental)	0,25,125,325 mg/kg bw	TOX-EXP IND - accumulation	kidney lead concentrations	increase at 125, 625 mg/kg bw 7.2, 15.5 ppm at 125, 625 mg/kg bw, respectively	cc	28
LEAD (elemental)	0, 10, 50 ppm	TOX-EXP IND - accumulation	lead concentration in eggshell	no effect	cd	29
LEAD (elemental)	0, 10, 50 ppm	TOX-EXP IND - accumulation	lead concentrations in bones	62.0 ppm tibia, 13.5 ppm humeri at 50 ppm	ce	29
LEAD (elemental)	0,25,125,325 mg/kg bw	TOX-EXP IND - accumulation	liver lead concentration	increase at all doses 1.4, 3.5, 5.5 ppm at 25, 125, 625 mg/kg bw, respectively	cf	28
LEAD (elemental)	0, 10, 50 ppm	TOX-EXP IND - accumulation	mean lead concentration in liver	increase at 50 ppm 1.3 ppm (1.00 SD) males; 2.4 ppm (1.40 SD) females	cg	30
LEAD (elemental)	49 mg/d (lead shot)	TOX-EXP IND - accumulation	mean lead concentration (wet wt) in liver	0.367 (0.129 SE) ppm at 49 mg/d	ch	31
LEAD (elemental)	49 mg/d (lead shot)	TOX-EXP IND - accumulation	mean lead concentration (wet wt) in bone	28.70 (2.6 SE) ppm at 49 mg/d	ci	31
LEAD (elemental)	0, 10, 50 ppm	TOX-EXP IND - biomarkers	mean blood delta aminolevulinic acid dehydratase	decrease at 10, 50 ppm	cj	30
LEAD (elemental)	0,25,125,325 mg/kg bw	TOX-MORT - dose-response data		40% at 625 mg/kg bw	ck	28
LEAD (elemental)	0,25,125,625 mg/kg bw	TOX-Non-Reproto-Sublethal - cellular/biochemical effects	brain delta aminolevulinic acid dehydratase activity	decrease at 125, 625 mg/kg bw (47-57%)	cl	32
LEAD (elemental)	0,25,125,625 mg/kg bw	TOX-Non-Reproto-Sublethal - cellular/biochemical effects	hematocrit	31% decrease at 625 mg/kg bw 14% decrease at 125 mg/kg bw	cm	32
LEAD (elemental)	0,25,125,625 mg/kg bw	TOX-Non-Reproto-Sublethal - cellular/biochemical effects	kidney delta aminolevulinic acid dehydratase activity	decrease at 125, 625 mg/kg bw (71-79%)	cn	32
LEAD (elemental)	0,25,125,625 mg/kg bw	TOX-Non-Reproto-Sublethal - cellular/biochemical effects	liver delta aminolevulinic acid dehydratase activity	decrease at 125, 625 mg/kg bw (20-25%)	co	32
LEAD (elemental)	0,25,125,625 mg/kg bw	TOX-Non-Reproto-Sublethal - cellular/biochemical effects	plasma creatine phosphokinase	30% decrease at 625 mg/kg bw 25% decrease at 125 mg/kg bw	cp	32
LEAD (elemental)	0,25,125,625 mg/kg bw	TOX-Non-Reproto-Sublethal - cellular/biochemical effects	red blood cell delta aminolevulinic acid dehydratase	decrease at all doses (45-59%)	cq	32
LEAD (elemental)	0,25,125,625 mg/kg bw	TOX-Non-Reproto-Sublethal - cellular/biochemical effects	red blood cell hemoglobin content	48% decrease at 625 mg/kg bw 27% decrease at 125 mg/kg bw 12% decrease at 25 mg/kg bw	cr	32

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LEAD (elemental)	0,25,125,325 mg/kg bw	TOX-Non-Repro-Sublethal - organ/system effects	body weight at end of dosing relative to control	decrease at 125, 625 mg/kg bw	cs	28
LEAD (elemental)	0,25,125,325 mg/kg bw	TOX-Non-Repro-Sublethal - organ/system effects	growth rate relative to control	decrease at 125, 625 mg/kg bw	ct	28
LEAD (elemental)	0, 10, 50 ppm	TOX-Non-Repro-Sublethal - organ/system effects	mean organ and carcass weights	no effect	cu	30
LEAD (elemental)	0, 10, 50 ppm	TOX-Non-Repro-Sublethal - organ/system effects	mean packed cell volume and red blood cell hemoglobin	no effect	cv	30
LEAD (elemental)	0, 10, 50 ppm	TOX-REPRO - physiology	eggshell thickness	no effect	cw	29
LEAD COMPOUNDS	0.5, 120, 212, 448 ppm (dry wt)	TOX-EXP IND - accumulation	mean lead concentration in blood	1.13 ppm blood at 212 ppm; 1.69 ppm blood at 448 ppm	cx	33
LEAD COMPOUNDS	0.5, 120, 212, 448 ppm (dry wt)	TOX-EXP IND - accumulation	mean lead concentration in femur	7.84 ppm femur at 120 ppm; 16.60 ppm femur at 212 ppm; 18.44 ppm femur at 448 ppm	cy	33
LEAD COMPOUNDS	29.3 ppm	TOX-EXP IND - accumulation	mean lead concentration (wet wt) in liver	0.357 (0.012 SE) ppm at 29.3 ppm	cz	31
LEAD COMPOUNDS	29.3 ppm	TOX-EXP IND - accumulation	mean lead concentration (wet wt) in bone	7.63 (1.03 SE) ppm at 29.3 ppm	da	31
LEAD COMPOUNDS	3.0-1640 ug/g (wet wt) in prey species	TOX-EXP IND - accumulation	mean lead concentration in blood (wet wt)	0.24 ug/g at study area, 0.087 ug/g at reference area	db	34
LEAD COMPOUNDS	3.0-1640 ug/g (wet wt) in prey species	TOX-EXP IND - accumulation	mean lead concentration in blood (wet wt)	0.46 ug/g at study area 0.25 ug/g at reference area	dc	34
LEAD COMPOUNDS	3.0-1640 ug/g (wet wt) in prey species	TOX-EXP IND - accumulation	mean lead concentration in liver	0.23 ug/g (wet wt)	dd	34
LEAD COMPOUNDS	3.0-1640 ug/g (wet wt) in prey species	TOX-EXP IND - biomarkers	red blood cell delta aminolevulinic acid dehydratase activity (relative to control)	decreased	de	34
LEAD COMPOUNDS	3.0-1640 ug/g (wet wt) in prey species	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hematocrit	decreased	df	34
LEAD COMPOUNDS	3.0-1640 ug/g (wet wt) in prey species	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hemoglobin (relative to control)	decreased	dg	34
LEAD COMPOUNDS	0.5, 120, 212, 448 ppm (dry wt)	TOX-Non-Repro-Sublethal - cellular/biochemical effects	packed cell volume, hemoglobin concentration, erythrocyte counts	no effect	dh	33
LEAD COMPOUNDS	3.0-1640 ug/g (wet wt) in prey species	TOX-REPRO - reproductive success	number of young produced	no effect	di	34
METHYLPARATHION	0, 0.375, 1.0, 2.0, 3.0 mg/kg bw	TOX-EXP IND - biomarkers	plasma cholinesterase activity 2 hr post-dose	decrease at 2, 3 mg/kg bw	dj	35
METHYLPARATHION	0, 0.375, 1.0, 2.0, 3.0 mg/kg bw	TOX-MORT - dose-response data	mortality rate 2 hr post-dose	increase at 3 mg/kg bw	dk	35
METHYLPARATHION	0, 0.375, 1.0, 2.0, 3.0 mg/kg bw	TOX-Non-Repro-Sublethal - behavioral effects	abnormal posture, ataxia, paresis	increased at 2, 3 mg/kg bw	dl	35
METHYLPARATHION	0, 0.375, 1.0, 2.0, 3.0 mg/kg bw	TOX-Non-Repro-Sublethal - cellular/biochemical effects	brain acetylcholinesterase activity 10 hr post-dose	decrease at 1, 2, 3 mg/kg bw	dm	35
METHYLPARATHION	0, 0.375, 1.0, 2.0, 3.0 mg/kg bw	TOX-Non-Repro-Sublethal - cellular/biochemical effects	plasma glucose concentrations	increased at 2, 3 mg/kg bw	dn	35
METHYLPARATHION	0, 0.375, 1.0, 2.0, 3.0 mg/kg bw	TOX-Non-Repro-Sublethal - whole animal	cloacal temperature	decrease at 2, 3 mg/kg bw	do	35

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MIREX	0 and 8 ppm, wet weight (=2.3-2.5 mg/kg bw/d)	TOX-REPRO - physiology	sperm concentration	40.3% decrease @ 8 ppm	dp	4
MIREX	0 and 8 ppm, wet weight (=2.3-2.5 mg/kg bw/d)	TOX-REPRO - physiology	sperm motility	no effect	dq	4
MONOCROTOPHOS	0.7-3.3 mg/kg bw	TOX-MORT - toxicity benchmarks	LD50	1.5 mg/kg bw	dr	8
PARAQUAT	0,10,25,60 mg/kg bw/d	TOX-MORT - dose-response data	percent mortality	22% @ 10 mg/kg, 18% @ 25 mg/kg, 44% @ 60 mg/kg	ds	36
PARAQUAT	0,10,25,60 mg/kg bw/d	TOX-REPRO - development	body weight by 10 days of dosing	86% of control @ 25 mg/kg, 74% of control @ 60 mg/kg	dt	36
PARAQUAT	0,10,25,60 mg/kg bw/d	TOX-REPRO - development	percent increase over controls in brain to body weight ratio	11% @ 25 mg/kg, 25% @ 60 mg/kg	du	36
PARAQUAT	0,10,25,60 mg/kg bw/d	TOX-REPRO - development	percent increase over controls in liver to body weight ratio	14% @ 25 mg/kg, 18% @ 60 mg/kg	dv	36
PARAQUAT	0,10,25,60 mg/kg bw/d	TOX-REPRO - development	percent increase over controls in kidney to body weight ratio	51% @ 60 mg/kg	dw	36
PARAQUAT	0,10,25,60 mg/kg bw/d	TOX-REPRO - development	percent increase over controls in lung to body weight ratio	no effect	dx	36
PARAQUAT	0,10,25,60 mg/kg bw/d	TOX-REPRO - development	skeletal growth (humerus, femur, radius-ulna, tibia-fibula)	decreased @ 25, 60 mg/kg	dy	36
PARATHION	<0.05, 0.08, 4.6 ppm	TOX-EXP IND - biomarkers	mean plasma cholinesterase activity relative to control	56% decrease at 4.6 ppm	dz	37
PARATHION	<0.05, 0.08, 4.6 ppm	TOX-MORT - dose-response data		25% at 4.6 ppm	ea	37
PARATHION	<0.05, 0.08, 4.6 ppm	TOX-Non-Repro-Sublethal - cellular/biochemical effects	mean brain cholinesterase activity relative to control	47% decrease at 4.6 ppm	eb	37
PCB 105 (2,3,3',4,4'-PENTACHLOROBIPHENYL); PCB 126 (3,3',4,4',5-PENTACHLOROBIPHENYL); PCB 153 (2,2',4,4',5,5'-HEXACHLOROBIPHENYL)	0, 4 mg/kg/d PCB 153, 3 mg/kg/d PCB 105, or 0.05 mg/kg/d PCB 126; 3 x's/wk	TOX-EXP IND - accumulation	PCB concentrations in pooled adipose tissue	2.4 (control), 119.0 (PCB 153), 182.0 (PCB 105), 3.3 (PCB 126) mg/kg, wet weight	ec	38
PCB 105 (2,3,3',4,4'-PENTACHLOROBIPHENYL); PCB 126 (3,3',4,4',5-PENTACHLOROBIPHENYL); PCB 153 (2,2',4,4',5,5'-HEXACHLOROBIPHENYL)	0, 4 mg/kg/d PCB 153, 3 mg/kg/d PCB 105, or 0.05 mg/kg/d PCB 126; 3 x's/wk	TOX-Non-Repro-Sublethal - cellular/biochemical effects	7-ethoxyresorufin O-deethylase and aldrin epoxidase activities in liver	increased with PCB 126	ed	38
PCB 105 (2,3,3',4,4'-PENTACHLOROBIPHENYL); PCB 126 (3,3',4,4',5-PENTACHLOROBIPHENYL); PCB 153 (2,2',4,4',5,5'-HEXACHLOROBIPHENYL)	0, 4 mg/kg/d PCB 153, 3 mg/kg/d PCB 105, or 0.05 mg/kg/d PCB 126; 3 x's/wk	TOX-Non-Repro-Sublethal - cellular/biochemical effects	aminopyrine N-demethylase and aldrin epoxidase activities in liver	increased with PCB 153	ee	38
PCB 105 (2,3,3',4,4'-PENTACHLOROBIPHENYL); PCB 126 (3,3',4,4',5-PENTACHLOROBIPHENYL); PCB 153 (2,2',4,4',5,5'-HEXACHLOROBIPHENYL)	0, 4 mg/kg/d PCB 153, 3 mg/kg/d PCB 105, or 0.05 mg/kg/d PCB 126; 3 x's/wk	TOX-Non-Repro-Sublethal - cellular/biochemical effects	aminopyrine N-demethylase activity in liver	increased with PCB 105	ef	38
PCB 105 (2,3,3',4,4'-PENTACHLOROBIPHENYL); PCB 126 (3,3',4,4',5-PENTACHLOROBIPHENYL); PCB 153 (2,2',4,4',5,5'-HEXACHLOROBIPHENYL)	0, 4 mg/kg/d PCB 153, 3 mg/kg/d PCB 105, or 0.05 mg/kg/d PCB 126; 3 x's/wk	TOX-Non-Repro-Sublethal - cellular/biochemical effects	hepatic porphyrin levels	no effect	eg	38
PCB 105 (2,3,3',4,4'-PENTACHLOROBIPHENYL); PCB 126 (3,3',4,4',5-PENTACHLOROBIPHENYL); PCB 153 (2,2',4,4',5,5'-HEXACHLOROBIPHENYL)	0, 4 mg/kg/d PCB 153, 3 mg/kg/d PCB 105, or 0.05 mg/kg/d PCB 126; 3 x's/wk	TOX-Non-Repro-Sublethal - organ/system effects	liver weight	no effect	eh	38

Toxicity Data for American Kestrel (*Falco sparverius*)*

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Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
PCB 126 (3,3',4,4',5-PENTACHLOROBIPHENYL)	0,50,250,1000 g/ng bw	TOX-EXP IND - accumulation	concentration in liver	in ng/g, wet wt: 156 (@ 50 ng/g), 380 (@ 250 ng/g), 1098 (@1000 ng/g)	ei	39
PCB 126 (3,3',4,4',5-PENTACHLOROBIPHENYL)	0, 0.23, 2.3, 23, 233 ng/g egg weight	TOX-MORT - dose-response data	percent hatching success, percent pipped versus controls	reduced @ 233 ng/g	ej	40
PCB 126 (3,3',4,4',5-PENTACHLOROBIPHENYL)	0,50,250,1000 g/ng bw	TOX-Non-Reproto-Sublethal - cellular/biochemical effects	hematocrit and hemoglobin values versus controls	no effect	ek	39
PCB 126 (3,3',4,4',5-PENTACHLOROBIPHENYL)	0,50,250,1000 g/ng bw	TOX-Non-Reproto-Sublethal - cellular/biochemical effects	hepatic monooxygenase activities versus controls	increased @ 50,250,1000 ng/g bw	el	39
PCB 126 (3,3',4,4',5-PENTACHLOROBIPHENYL)	0,50,250,1000 g/ng bw	TOX-Non-Reproto-Sublethal - cellular/biochemical effects	plasma enzyme activities indicative of hepatotoxicity versus controls	increased	em	39
PCB 126 (3,3',4,4',5-PENTACHLOROBIPHENYL)	0,50,250,1000 g/ng bw	TOX-Non-Reproto-Sublethal - cellular/biochemical effects	relationship between hepatic PCB 126 concentrations and ratio of oxidized to reduced glutathione	positive correlation	en	39
PCB 126 (3,3',4,4',5-PENTACHLOROBIPHENYL)	0,50,250,1000 g/ng bw	TOX-Non-Reproto-Sublethal - organ/system effects	incidence and severity of lesions in liver, spleen, bursa, thyroid versus controls	increased @ 50,250,1000 ng/g bw	eo	39
PCB 126 (3,3',4,4',5-PENTACHLOROBIPHENYL)	0,50,250,1000 g/ng bw	TOX-Non-Reproto-Sublethal - whole animal	body and organ growth versus controls	decreased @ 250, 1000 ng/g bw	ep	39
PCB 126 (3,3',4,4',5-PENTACHLOROBIPHENYL)	0, 0.23, 2.3, 23, 233 ng/g egg weight	TOX-REPRO - development	incidence of malformations or edema, and EROD activity versus controls	increased @ 2.3, 23, 233 ng/g	eq	40
PCB 126 (3,3',4,4',5-PENTACHLOROBIPHENYL)	0, 0.23, 2.3, 23, 233 ng/g egg weight	TOX-REPRO - development	liver weight, radius and femur length versus controls	reduced @ 233 ng/g	er	40
PCB 77 (3,3',4,4'-tetrachlorinated biphenyl)	0, 100, 1000 ng/g egg weight	TOX-MORT - dose-response data	percent hatching success, percent pipped versus controls	reduced @ 100, 1000 ng/g	es	40
PCB 77 (3,3',4,4'-tetrachlorinated biphenyl)	0, 100, 1000 ng/g egg weight	TOX-REPRO - development	humerus length versus controls	reduced @ 1000 ng/g	et	40
PCB 77 (3,3',4,4'-tetrachlorinated biphenyl)	0, 100, 1000 ng/g egg weight	TOX-REPRO - development	incidence of malformations or edema, and EROD activity versus controls	increased @ 100, 1000 ng/g	eu	40
PHOSPHORUS (YELLOW OR WHITE)	6.4 ug/g diet, wet wt (1.1 SE)	TOX-EXP IND - accumulation	accumulation in skin	increased	ev	41
PHOSPHORUS (YELLOW OR WHITE)	6.4 ug/g diet, wet wt (1.1 SE)	TOX-Non-Reproto-Sublethal - whole animal	occurrence of phosphorus intoxication symptoms	no effect	ew	41
POLYCHLORINATED BIPHENYLS		TOX-EXP IND - accumulation		review	ex	42
POLYCHLORINATED BIPHENYLS		TOX-MORT - toxicity benchmarks		review	ey	42
POLYCHLORINATED BIPHENYLS		TOX-Non-Reproto-Sublethal - cellular/biochemical effects		review	ez	42
SELENIUM COMPOUNDS	8 ppm, dry wt, in contaminated prey species	TOX-EXP IND - accumulation	maximum observed Se concentration in blood	7.5 ppm Se, dry wt	fa	43
SELENOMETHIONINE	0.6, 12 ppm, dry wt, Se in diet	TOX-EXP IND - accumulation	relation between Se concentrations in blood (dry wt) and diet (dry wt)	blood Se concentration = 1.307 + 0.852(diet Se concentration)	fb	44
SELENOMETHIONINE	0.6, 12 ppm, dry wt, Se in diet	TOX-EXP IND - accumulation	relation between Se concentrations in egg (dry wt) and diet (dry wt)	egg Se concentration = 1.307 + 0.852(diet Se concentration)	fc	44

Toxicity Data for American Kestrel (*Falco sparverius*)*

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Chemical	Tox Exposure	Endpoint Type	Endpoint Description	Endpoint Value	Note	Reference
SELENOMETHIONINE	0.5,9 ppm, dry wt, in diet	TOX-EXP IND - accumulation	relationship between Se concentrations in diet and blood	$Y=1.132 + 0.801X \ (R^2 = 0.932)$	fd	43
SELENOMETHIONINE	0.5,9 ppm, dry wt, in diet	TOX-MORT - dose-response data	incidence of mortality or signs of toxicity	no effect	fe	43
SELENOMETHIONINE	0.6, 12 ppm, dry wt, Se in diet	TOX-Non-Reproto-Sublethal - behavioral effects	food consumption versus controls	increased @ 6 or 12 ppm Se	ff	44
SELENOMETHIONINE	0.6, 12 ppm, dry wt, Se in diet	TOX-REPRO - development	chick mass and size at hatch, and chick survival to fledging versus controls	no effect	fg	44
SELENOMETHIONINE	0.6, 12 ppm, dry wt, Se in diet	TOX-REPRO - physiology	egg mass, width, length, and volume versus controls	no effect	fh	44
SELENOMETHIONINE	0.6, 12 ppm, dry wt, Se in diet	TOX-REPRO - reproductive success	percent of pairs that laid eggs, number of fertile pairs and egg hatchability versus controls	no effect	fi	44
SELENOMETHIONINE	0.6, 12 ppm, dry wt, Se in diet	TOX-REPRO - reproductive success	ratio of # fertile eggs to total # eggs laid versus 6 ppm Se group	reduced @ 12 ppm Se	fj	44
SELENOMETHIONINE; SELENOMETHIONINE	0.6, 12 ppm, dry wt, Se in diet	TOX-REPRO - development	incidence of embryo deformities versus controls	no effect	fk	44

Notes

- a Adult; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=30560-19-1; TOX - Chemical=72-55-9; N=5-6/group; Tox Exp Tech=diet; Tox Exp Dur=single (acephate) chronic (DDE); Tox Study Dur=5 wks; Tox Stat Sig=NR
- b Adult; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=30560-19-1; TOX - Chemical=72-55-9; N=5-6/group; Tox Exp Tech=diet; Tox Exp Dur=single (acephate) chronic (DDE); Tox Study Dur=5 wks; Tox Stat Sig=N
- c Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=12672-29-6; N=8 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=6 mo; Tox Study Sig=Y; All concentrations were increased over those of controls.
- d Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=12672-29-6; N=8 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=6 mo; Tox Study Dur=6 mo; Tox Stat Sig=Y; All concentrations were increased over those of controls.
- e Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=12672-29-6; N=8 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=6 mo; Tox Study Dur=6 mo; Tox Stat Sig=Y
- f Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=11097-69-1; N=4/treatment group; Tox Exp Tech=oral gavage; Tox Exp Dur=daily for 4, 8 or 12 weeks; Tox Study Dur=4, 8, or 12 weeks; Tox Stat Sig=Y
- g Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=11097-69-1; N=4/treatment group; Tox Exp Tech=oral gavage; Tox Exp Dur=daily for 4, 8 or 12 weeks; Tox Study Dur=4, 8, or 12 weeks; Tox Stat Sig=Y
- h Adult; Lab; M; Species - California (R)=*Falco sparverius*; TOX - Chemical=11097-69-1; N=10/group; Tox Exp Tech=diet; Tox Exp Dur=62 and 69 d (2 study periods); Tox Study Dur=62 and 69 d (2 study periods); Tox Stat Sig=Y
- i Adult; Lab; M; Species - California (R)=*Falco sparverius*; TOX - Chemical=11097-69-1; N=10/group; Tox Exp Tech=diet; Tox Exp Dur=62 and 69 d (2 study periods); Tox Study Dur=62 and 69 d (2 study periods); Tox Stat Sig=N
- j Adult; Lab; M; Species - California (R)=*Falco sparverius*; TOX - Chemical=11097-69-1; TOX - Chemical=2385-85-5; N=5-10/group; Tox Exp Tech=diet; Tox Exp Dur=62 and 69 d (2 study periods); Tox Study Dur=62 and 69 d (2 study periods); Tox Stat Sig=Y
- k Adult; Lab; M; Species - California (R)=*Falco sparverius*; TOX - Chemical=11097-69-1; TOX - Chemical=2385-85-5; N=5-10/group; Tox Exp Tech=diet; Tox Exp Dur=62 and 69 d (2 study periods); Tox Study Dur=62 and 69 d (2 study periods); Tox Stat Sig=Y
- l Adult; Lab; M; Species - California (R)=*Falco sparverius*; TOX - Chemical=11097-69-1; TOX - Chemical=2385-85-5; N=5-10/group; Tox Exp Tech=diet; Tox Exp Dur=62 and 69 d (2 study periods); Tox Study Dur=62 and 69 d (2 study periods); Tox Stat Sig=N
- m Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=11097-69-1; TOX - Chemical=57465-28-8; TOX - Chemical=35065-27-1; TOX - Chemical=32598-13-3; N=4/treatment group; Tox Exp Tech=oral gavage; Tox Exp Dur=single; Tox Study Dur=5 d; Tox Stat Sig=Y
- n Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=11097-69-1; TOX - Chemical=57465-28-8; TOX - Chemical=35065-27-1; TOX - Chemical=32598-13-3; N=4/treatment group; Tox Exp Tech=oral gavage; Tox Exp Dur=single; Tox Study Dur=5 d; Tox Stat Sig=Y; No effect observed on CYP1A concentration or aminopyrine-N-demethylase activity.
- o Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=11097-69-1; TOX - Chemical=57465-28-8; TOX - Chemical=35065-27-1; TOX - Chemical=32598-13-3; N=4/treatment group; Tox Exp Tech=oral gavage; Tox Exp Dur=single; Tox Study Dur=5 d; Tox Stat Sig=Y; No effect observed on CYP1A concentration or aminopyrine-N-demethylase activity.
- p Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=11097-69-1; TOX - Chemical=57465-28-8; TOX - Chemical=35065-27-1; TOX - Chemical=32598-13-3; N=4/treatment group; Tox Exp Tech=oral gavage; Tox Exp Dur=single; Tox Study Dur=5 d; Tox Stat Sig=Y; No effect observed on CYP1A concentration or aminopyrine-N-demethylase activity.
- q Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=11097-69-1; TOX - Chemical=57465-28-8; TOX - Chemical=35065-27-1; TOX - Chemical=32598-13-3; N=4/treatment group; Tox Exp Tech=oral gavage; Tox Exp Dur=single; Tox Study Dur=5 d; Tox Stat Sig=Y
- r Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=POLYCHLORINATED DIBENZO-P-DIOXINS; N=4/group; Tox Exp Tech=diet; Tox Exp Dur=14 d; Tox Study Dur=14 d; Tox Stat Sig=Y

s Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=11097-69-1; TOX - Chemical=POLYCHLORINATED DIBENZO-P-DIOXINS; TOX - Dose-Response Data Format=DR Table; N=4/group; Tox Exp Tech=diet; Tox Exp Dur=5 mo; Tox Study Dur=5 mo; Tox Stat Sig=NR

t Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=37324-23-5; TOX - Chemical=POLYCHLORINATED DIBENZO-P-DIOXINS; TOX - Dose-Response Data Format=DR Table; N=4/group; Tox Exp Tech=diet; Tox Exp Dur=5 mo; Tox Study Dur=5 mo; Tox Stat Sig=NR; no difference in magnitude of response compared with Aroclor 1254

u NR; VA; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=1563-66-2; N=3 birds; Tox Exp Tech=multiple; Tox Exp Dur=NR; Tox Study Dur=approx. 2 mo; Tox Stat Sig=NR

v Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=1563-66-2; N=8; Tox Exp Tech=diet; Tox Exp Dur=1 d; Tox Study Dur=1 d; Tox Stat Sig=NR; Survivors at all doses exhibited signs of acute poisoning, after consuming <10% of treated 25 g meatball.

w NR; VA; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=1563-66-2; N=44 fields; Tox Exp Tech=field application; Tox Exp Dur=NR; Tox Study Dur=approx. 2 mo; Tox Stat Sig=NR

x Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=1563-66-2; N=5/group; Tox Exp Tech=oral intubation; Tox Exp Dur=single; Tox Study Dur=5 d; Tox Stat Sig=NR

y Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=1563-66-2; N=8; Tox Exp Tech=diet; Tox Exp Dur=1 d; Tox Study Dur=1 d; Tox Stat Sig=NR; Activity was 31% of controls in survivors. Activity was significantly greater in carbofuran-treated birds that died than in fenthion-treated birds that died.

z Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=1563-66-2; N=12; Tox Exp Tech=oral intubation; Tox Exp Dur=single; Tox Study Dur=8 hr; Tox Stat Sig=NR

aa Juvenile; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=CRUDE OILS; TOX - Dose-Response Data Format=DR Figure; N=16/group; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Study Dur=8 wks; Tox Stat Sig=Y

ab Juvenile; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=CRUDE OILS; TOX - Dose-Response Data Format=DR Table; N=16/group; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Study Dur=8 wks; Tox Stat Sig=Y; significant after 1 wk of exposure, but not after

ac Juvenile; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=CRUDE OILS; TOX - Dose-Response Data Format=DR Table; N=16/group; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Study Dur=8 wks; Tox Stat Sig=N

ad Juvenile; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=CRUDE OILS; TOX - Dose-Response Data Format=DR Figure; N=16/group; Tox Exp Tech=diet; Tox Exp Dur=4 wks; Tox Study Dur=8 wks; Tox Stat Sig=Y; body weight recovered after return to untreated diet within 3 weeks

ae Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=143-33-9; N=5/dose; Tox Exp Tech=oral; Tox Exp Dur=single dose; Tox Study Dur=15-30 min; Tox Stat Sig=NR

af Adult; Lab; M; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; N=2; Tox Exp Tech=diet; Tox Exp Dur=14-16 mos; Tox Study Dur=14-16 mos; Tox Stat Sig=NR

ag Adult; Lab; M; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; N=2; Tox Exp Tech=diet; Tox Exp Dur=14-16 mos; Tox Study Dur=14-16 mos; Tox Stat Sig=NR

ah Adult; Lab; M; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; N=11; Tox Exp Tech=diet; Tox Exp Dur=12-15 mos; Tox Study Dur=12-15 mos; Tox Stat Sig=NR

ai Embryo; CANADA; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; N=10 eggs; N. Niagra Peninsula, Ontario; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=NR; see citation for PCB congener, other organochlorine analyses

aj Adult; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; N=6; Tox Exp Tech=diet; Tox Exp Dur=58 d; Tox Study Dur=58 d; Tox Stat Sig=N

ak Adult; Lab; M; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; N=11; Tox Exp Tech=diet; Tox Exp Dur=12-15 mos; Tox Study Dur=12-15 mos; Tox Stat Sig=NR

al Embryo; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; N=9-10; Tox Exp Tech=diet; Tox Exp Dur=1 yr; Tox Study Dur=NR; Tox Stat Sig=Y

am Adult; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; N=6; Tox Exp Tech=diet; Tox Exp Dur=40 d; Tox Study Dur=40 d; Tox Stat Sig=N

an Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; N=8/group; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=Y

ao Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; N=8/group; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=N

ap Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; N=8/group; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=Y

aq Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; N=8/group; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=Y

ar Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; N=2-5 pairs/dose; Tox Exp Tech=diet; Tox Exp Dur=6 mo; Tox Study Dur=6 mo; Tox Stat Sig=Y; see citation for comparison with field data

as Adult; NY; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; N=34 eggs; Cayuga Lake Basin; Tox Exp Tech=parent diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=NR; see citation for dieldrin, heptachlor epoxide and PCB egg residues

at Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; N=8-10; Tox Exp Tech=diet; Tox Exp Dur=1 yr; Tox Study Dur=NR; Tox Stat Sig=Y

au Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; N=18; Tox Exp Tech=diet; Tox Exp Dur=6 mo; Tox Study Dur=NR; Tox Stat Sig=Y

av Both Adult and Juv.; NY; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; TOX - Chemical=60-57-1; TOX - Chemical=1024-57-3; TOX - Chemical=27304-13-8; TOX - Chemical=1336-36-3; N=5 kestrels; Tox Exp Tech=NR; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=NR

aw Juvenile; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; TOX - Chemical=60-57-1; TOX - Chemical=LEAD COMPOUNDS; N=2; Tox Exp Tech=diet; Tox Exp Dur=60 d; Tox Study Dur=60 d; Tox Stat Sig=NR

ax Juvenile; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; TOX - Chemical=60-57-1; TOX - Chemical=LEAD COMPOUNDS; N=2; Tox Exp Tech=diet; Tox Exp Dur=60 d; Tox Study Dur=60 d; Tox Stat Sig=NR

ay Juvenile; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; TOX - Chemical=60-57-1; TOX - Chemical=LEAD COMPOUNDS; N=2; Tox Exp Tech=diet; Tox Exp Dur=60 d; Tox Study Dur=60 d; Tox Stat Sig=NR

az Juvenile; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; TOX - Chemical=60-57-1; TOX - Chemical=LEAD COMPOUNDS; N=2; Tox Exp Tech=diet; Tox Exp Dur=60 d; Tox Study Dur=60 d; Tox Stat Sig=NR

ba Juvenile; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=72-55-9; TOX - Chemical=60-57-1; TOX - Chemical=LEAD COMPOUNDS; N=2; Tox Exp Tech=diet; Tox Exp Dur=60 d; Tox Study Dur=60 d; Tox Stat Sig=NR

bb Embryo; ID; OR; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=DDT (Technical Grade Mixture); N=21 eggs; La Grande-Enterprise (OR), Potlatch (ID); Tox Exp Tech=diet; Tox Exp Dur=1 yr; Tox Study Dur=1 yr; Tox Stat Sig=NR

bc Adult; ID; OR; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=DDT (Technical Grade Mixture); N=23 birds; La Grande-Enterprise (OR), Potlatch (ID); Tox Exp Tech=diet; Tox Exp Dur=1 yr; Tox Study Dur=1 yr; Tox Stat Sig=Y; see citation for dieldrin and PCB residue data

bd Adult; ID; OR; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=DDT (Technical Grade Mixture); N=21 eggs; La Grande-Enterprise (OR), Potlatch (ID); Tox Exp Tech=diet; Tox Exp Dur=1 yr; Tox Study Dur=1 yr; Tox Stat Sig=Y

be Adult; ID; OR; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=DDT (Technical Grade Mixture); N=21 eggs; La Grande-Enterprise (OR), Potlatch (ID); Tox Exp Tech=diet; Tox Exp Dur=1 yr; Tox Study Dur=1 yr; Tox Stat Sig=N

Toxicity Data for American Kestrel (*Falco sparverius*)*

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- bf Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=115-32-2; N=10/group; Tox Exp Tech=gavage; Tox Exp Dur=daily, throughout breeding season; Tox Study Dur=2 generation; Tox Stat Sig=Y; Detection limit was 256 ng/g.
- bg Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=115-32-2; TOX - Dose-Response Data Format=DR Table; N=2-4/group; Tox Exp Tech=oral; Tox Exp Dur=39 d; Tox Study Dur=39 d; Tox Stat Sig=NR; See paper for individual compound analyses. No residues were found in controls dosed with corn oil.
- bh Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=115-32-2; TOX - Dose-Response Data Format=DR Table; N=2-4/group; Tox Exp Tech=oral; Tox Exp Dur=39 d; Tox Study Dur=39 d; Tox Stat Sig=NR; See paper for individual compound analyses. No residues were found in controls dosed with corn oil.
- bi Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=115-32-2; N=10 pairs/group; Tox Exp Tech=gavage; Tox Exp Dur=daily, throughout the breeding season; Tox Study Dur=5-7 d; Tox Stat Sig=Y
- bj Embryo; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=115-32-2; N=10/group; Tox Exp Tech=gavage; Tox Exp Dur=daily, throughout breeding season; Tox Study Dur=2 generation; Tox Stat Sig=Y
- bk Adult; Lab; M; Species - California (R)=*Falco sparverius*; TOX - Chemical=115-32-2; N=10/group; Tox Exp Tech=gavage; Tox Exp Dur=daily, throughout breeding season; Tox Study Dur=2 generation; Tox Stat Sig=Y; Data from 20 mg/kg group not statistically analyzed.
- bl Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=115-32-2; N=10/group; Tox Exp Tech=gavage; Tox Exp Dur=daily, throughout breeding season; Tox Study Dur=2 generation; Tox Stat Sig=Y; Data from 20 mg/kg group not statistically analyzed.
- bm Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=115-32-2; N=10/group; Tox Exp Tech=gavage; Tox Exp Dur=daily, throughout breeding season; Tox Study Dur=2 generation; Tox Stat Sig=Y
- bn Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=115-32-2; N=10/group; Tox Exp Tech=gavage; Tox Exp Dur=daily, throughout breeding season; Tox Study Dur=2 generation; Tox Stat Sig=Y
- bo Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=593-74-8; N=NR; Tox Exp Tech=diet; Tox Exp Dur=3 mo; Tox Study Dur=NR; Tox Stat Sig=N
- bp Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=2104-64-5; N=5/group; Tox Exp Tech=oral intubation; Tox Exp Dur=single; Tox Study Dur=5 d; Tox Stat Sig=NR
- bq Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=2104-64-5; N=12; Tox Exp Tech=oral intubation; Tox Exp Dur=single; Tox Study Dur=8 hr; Tox Stat Sig=NR
- br Adult; Lab; M; Species - California (R)=*Falco sparverius*; TOX - Chemical=55-38-9; N=14; Tox Exp Tech=diet; Tox Exp Dur=1-3 d; Tox Study Dur=1-3 d; Tox Stat Sig=NR; secondary toxicity after consumption of sparrows directly exposed to fenthion
- bs Adult; Lab; M; Species - California (R)=*Falco sparverius*; TOX - Chemical=55-38-9; N=14; Tox Exp Tech=diet; Tox Exp Dur=1-3 d; Tox Study Dur=1-3 d; Tox Stat Sig=NR; secondary toxicity after consumption of sparrows directly exposed to fenthion
- bt Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=55-38-9; N=8; Tox Exp Tech=diet; Tox Exp Dur=1 d; Tox Study Dur=1 d; Tox Stat Sig=NR; Survivors at all doses exhibited signs of acute poisoning, after consuming <10% of treated 25 g meatball.
- bu Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=55-38-9; N=5/group; Tox Exp Tech=oral intubation; Tox Exp Dur=single; Tox Study Dur=5 d; Tox Stat Sig=NR
- bv Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=55-38-9; N=8; Tox Exp Tech=diet; Tox Exp Dur=1 d; Tox Study Dur=1 d; Tox Stat Sig=NR; Activity was 10% of controls in survivors.
- bw Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=55-38-9; N=8; Tox Exp Tech=oral intubation; Tox Exp Dur=single; Tox Study Dur=8 hr; Tox Stat Sig=NR
- bx Adult; Lab; M; Species - California (R)=*Falco sparverius*; TOX - Chemical=55-38-9; N=14; Tox Exp Tech=diet; Tox Exp Dur=1-3 d; Tox Study Dur=1-3 d; Tox Stat Sig=NR; secondary toxicity after consumption of sparrows directly exposed to fenthion
- by Juvenile; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=7681-49-4; TOX - Dose-Response Data Format=DR Table; N=9-10/group; Age=7 d; Tox Exp Tech=diet; Tox Exp Dur=20 d; Tox Study Dur=20 d; Tox Stat Sig=Y
- bz Juvenile; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=7681-49-4; TOX - Dose-Response Data Format=DR Table; N=9-10/group; Age=7 d; Tox Exp Tech=diet; Tox Exp Dur=20 d; Tox Study Dur=20 d; Tox Stat Sig=Y
- ca Juvenile; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=7681-49-4; TOX - Dose-Response Data Format=DR Table; N=9-10/group; Age=7 d; Tox Exp Tech=diet; Tox Exp Dur=20 d; Tox Study Dur=20 d; Tox Stat Sig=Y
- cb Juvenile; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=7681-49-4; N=9-10/group; Age=7 d; Tox Exp Tech=diet; Tox Exp Dur=20 d; Tox Study Dur=20 d; Tox Stat Sig=N
- cc Nestling; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=7439-92-1; N=10/group; Tox Exp Tech=gavage; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y
- cd Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=7439-92-1; N=16 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=5-7 mo; Tox Study Dur=5-7 mo; Tox Stat Sig=N
- ce Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=7439-92-1; N=16 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=5-7 mo; Tox Study Dur=5-7 mo; Tox Stat Sig=Y
- cf Nestling; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=7439-92-1; N=10/group; Tox Exp Tech=gavage; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y
- cg Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=7439-92-1; N=16 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=5-7 mo; Tox Study Dur=5-7 mo; Tox Stat Sig=Y
- ch Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=7439-92-1; N=3/group; Tox Exp Tech=diet; Tox Exp Dur=60 d; Tox Study Dur=60 d; Tox Stat Sig=Y; birds fed lead shot
- ci Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=7439-92-1; N=3/group; Tox Exp Tech=diet; Tox Exp Dur=60 d; Tox Study Dur=60 d; Tox Stat Sig=Y; birds fed lead shot
- cj Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=7439-92-1; N=16 pairs/dose; Tox Exp Tech=diet; Tox Exp Dur=5-7 mo; Tox Study Dur=5-7 mo; Tox Stat Sig=Y
- ck Nestling; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=7439-92-1; N=10/group; Tox Exp Tech=gavage; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y
- cl Nestling; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=7439-92-1; N=10/group; Tox Exp Tech=gavage; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y
- cm Nestling; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=7439-92-1; N=10/group; Tox Exp Tech=gavage; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y
- cn Nestling; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=7439-92-1; N=10/group; Tox Exp Tech=gavage; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y
- co Nestling; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=7439-92-1; N=10/group; Tox Exp Tech=gavage; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y
- cp Nestling; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=7439-92-1; N=10/group; Tox Exp Tech=gavage; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y
- cq Nestling; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=7439-92-1; N=10/group; Tox Exp Tech=gavage; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y
- cr Nestling; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=7439-92-1; N=10/group; Tox Exp Tech=gavage; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y
- cs Nestling; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=7439-92-1; N=10/group; Tox Exp Tech=gavage; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y
- ct Nestling; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=7439-92-1; N=10/group; Tox Exp Tech=gavage; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y
- cu Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=7439-92-1; N=16 pairs/dose; Tox Exp Tech=diet; Tox Exp Dur=5-7 mo; Tox Study Dur=5-7 mo; Tox Stat Sig=N
- cv Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=7439-92-1; N=16 pairs/dose; Tox Exp Tech=diet; Tox Exp Dur=5-7 mo; Tox Study Dur=5-7 mo; Tox Stat Sig=N
- cw Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=7439-92-1; N=16 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=5-7 mo; Tox Study Dur=5-7 mo; Tox Stat Sig=N

Toxicity Data for American Kestrel (*Falco sparverius*)*

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cx Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=LEAD COMPOUNDS; N=8-14/group; Age=1-2 yr; Tox Exp Tech=diet; Tox Exp Dur=60 d; Tox Study Dur=60 d; Tox Stat Sig=Y; see citation for accumulation of lead in other tissues
cy Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=LEAD COMPOUNDS; N=8-14/group; Age=1-2 yr; Tox Exp Tech=diet; Tox Exp Dur=60 d; Tox Study Dur=60 d; Tox Stat Sig=Y; see citation for accumulation of lead in other tissues
cz Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=LEAD COMPOUNDS; N=3/group; Tox Exp Tech=diet; Tox Exp Dur=60 d; Tox Study Dur=60 d; Tox Stat Sig=Y; birds fed biologically incorporated lead
da Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=LEAD COMPOUNDS; N=3/group; Tox Exp Tech=diet; Tox Exp Dur=60 d; Tox Study Dur=60 d; Tox Stat Sig=Y; birds fed biologically incorporated lead
db Nestling; ID; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=LEAD COMPOUNDS; N=30 (study area)
22 (reference); Coeur D'Alene River; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=Y
dc Adult; ID; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=LEAD COMPOUNDS; N=3 (study area)
6 (reference); Coeur D'Alene River; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=Y
dd Juvenile; ID; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=LEAD COMPOUNDS; N=30; Coeur D'Alene River; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=NR
de Both Adult and Juv.; ID; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=LEAD COMPOUNDS; N=33; Coeur D'Alene River; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=Y
df Juvenile; ID; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=LEAD COMPOUNDS; N=30; Coeur D'Alene River; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=Y
dg Both Adult and Juv.; ID; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=LEAD COMPOUNDS; N=33; Coeur D'Alene River; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=Y
dh Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=LEAD COMPOUNDS; N=8-14/group; Age=1-2 yr; Tox Exp Tech=diet; Tox Exp Dur=60 d; Tox Study Dur=60 d; Tox Stat Sig=N
di Adult; ID; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=LEAD COMPOUNDS; N=20 nests; Coeur D'Alene River; Tox Exp Tech=diet; Tox Exp Dur=NR; Tox Study Dur=NR; Tox Stat Sig=N
dj Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=298-00-0; N=5/dose; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=10 hr; Tox Stat Sig=Y
dk Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=298-00-0; Tox - Dose-Response Data Format=DR Figure; TOX - Dose-Response Data Format=DR Table; N=5/dose; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=10 hr; Tox Stat Sig=NR
dl Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=298-00-0; N=5/dose; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=10 hr; Tox Stat Sig=NR
dm Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=298-00-0; N=5/dose; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=10 hr; Tox Stat Sig=Y
dn Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=298-00-0; N=5/dose; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=10 hr; Tox Stat Sig=Y
do Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=298-00-0; N=5/dose; Tox Exp Tech=gavage; Tox Exp Dur=single; Tox Study Dur=10 hr; Tox Stat Sig=Y
dp Adult; Lab; M; Species - California (R)=*Falco sparverius*; TOX - Chemical=2385-85-5; N=5-10/group; Tox Exp Tech=diet; Tox Exp Dur=62 and 69 d (2 study periods); Tox Study Dur=62 and 69 d (2 study periods); Tox Stat Sig=N
dq Adult; Lab; M; Species - California (R)=*Falco sparverius*; TOX - Chemical=2385-85-5; N=5-10/group; Tox Exp Tech=diet; Tox Exp Dur=62 and 69 d (2 study periods); Tox Study Dur=62 and 69 d (2 study periods); Tox Stat Sig=N
dr Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=6923-22-4; N=5/group; Tox Exp Tech=oral intubation; Tox Exp Dur=single; Tox Study Dur=5 d; Tox Stat Sig=NR
ds Juvenile; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=1910-42-5; Tox - Dose-Response Data Format=DR Table; N=11/group; Tox Exp Tech=oral; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=NR; Death occurred at 6-9 d; 9% mortality in controls.
dt Juvenile; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=1910-42-5; Tox - Dose-Response Data Format=DR Figure; TOX - Dose-Response Data Format=DR Table; N=11/group; Tox Exp Tech=oral; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y
du Juvenile; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=1910-42-5; Tox - Dose-Response Data Format=DR Table; N=11/group; Tox Exp Tech=oral; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y
dv Juvenile; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=1910-42-5; Tox - Dose-Response Data Format=DR Table; N=11/group; Tox Exp Tech=oral; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y
dw Juvenile; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=1910-42-5; Tox - Dose-Response Data Format=DR Table; N=11/group; Tox Exp Tech=oral; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=NR
dx Juvenile; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=1910-42-5; Tox - Dose-Response Data Format=DR Table; N=11/group; Tox Exp Tech=oral; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=NR
dy Juvenile; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=1910-42-5; Tox - Dose-Response Data Format=DR Table; N=11/group; Tox Exp Tech=oral; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y
dz Adult; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=56-38-2; Tox - Dose-Response Data Format=DR Table; N=4/group; Tox Exp Tech=diet; Tox Exp Dur=up to 24 hr; Tox Study Dur=24 hr; Tox Stat Sig=NR
ea Adult; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=56-38-2; Tox - Dose-Response Data Format=DR Table; N=4/group; Tox Exp Tech=diet; Tox Exp Dur=up to 24 hr; Tox Study Dur=24 hr; Tox Stat Sig=NR
eb Adult; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=56-38-2; Tox - Dose-Response Data Format=DR Table; N=4/group; Tox Exp Tech=diet; Tox Exp Dur=up to 24 hr; Tox Study Dur=24 hr; Tox Stat Sig=NR
ec Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=32598-14-4; TOX - Chemical=57465-28-8; Tox - Chemical=35065-27-1; Tox - Dose-Response Data Format=DR Table; N=5-6/group; Age=1 yr; Tox Exp Tech=oral; Tox Exp Dur=4 wk; Tox Study Dur=4 wk; Tox Stat Sig=NR; total Aroclor measured in controls
ed Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=32598-14-4; TOX - Chemical=57465-28-8; Tox - Chemical=35065-27-1; Tox - Dose-Response Data Format=DR Table; N=5-6/group; Age=1 yr; Tox Exp Tech=oral; Tox Exp Dur=4 wk; Tox Study Dur=4 wk; Tox Stat Sig=Y
ee Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=32598-14-4; TOX - Chemical=57465-28-8; Tox - Chemical=35065-27-1; Tox - Dose-Response Data Format=DR Table; N=5-6/group; Age=1 yr; Tox Exp Tech=oral; Tox Exp Dur=4 wk; Tox Study Dur=4 wk; Tox Stat Sig=Y
ef Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=32598-14-4; TOX - Chemical=57465-28-8; Tox - Chemical=35065-27-1; Tox - Dose-Response Data Format=DR Table; N=5-6/group; Age=1 yr; Tox Exp Tech=oral; Tox Exp Dur=4 wk; Tox Study Dur=4 wk; Tox Stat Sig=Y
eg Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=32598-14-4; TOX - Chemical=57465-28-8; Tox - Chemical=35065-27-1; Tox - Dose-Response Data Format=DR Table; N=5-6/group; Age=1 yr; Tox Exp Tech=oral; Tox Exp Dur=4 wk; Tox Study Dur=4 wk; Tox Stat Sig=N
eh Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=32598-14-4; TOX - Chemical=57465-28-8; Tox - Chemical=35065-27-1; N=5-6/group; Age=1 yr; Tox Exp Tech=oral; Tox Exp Dur=4 wk; Tox Study Dur=4 wk; Tox Stat Sig=N

ei Nestling; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=57465-28-8; TOX - Dose-Response Data Format=DR Table; N=9-11/group; Age=Day 1-Day 10; Tox Exp Tech=gavage; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y; All groups were significantly higher than control levels.

ej Hatchling; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=57465-28-8; TOX - Dose-Response Data Format=DR Table; N=24-26/treatment group; Age=hatching; Tox Exp Tech=egg injection; Tox Exp Dur=single dose at incubation day 6; Tox Study Dur=through incubation until hatch; Tox Stat Sig=Y

ek Nestling; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=57465-28-8; TOX - Dose-Response Data Format=DR Table; N=9-11/group; Age=Day 1-Day 10; Tox Exp Tech=gavage; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=N

el Nestling; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=57465-28-8; TOX - Dose-Response Data Format=DR Table; N=9-11/group; Age=Day 1-Day 10; Tox Exp Tech=gavage; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y; See Table 3 for specific values of BROD, EROD, MROD, PROD.

em Nestling; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=57465-28-8; TOX - Dose-Response Data Format=DR Figure; N=9-11/group; Age=Day 1-Day 10; Tox Exp Tech=gavage; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y; Alkaline phosphatase and creatine phosphokinase decreased with increasing dose.

en Nestling; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=57465-28-8; TOX - Dose-Response Data Format=DR Table; N=9-11/group; Age=Day 1-Day 10; Tox Exp Tech=gavage; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y

eo Nestling; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=57465-28-8; TOX - Dose-Response Data Format=DR Table; N=9-11/group; Age=Day 1-Day 10; Tox Exp Tech=gavage; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=NR

ep Nestling; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=57465-28-8; TOX - Dose-Response Data Format=DR Table; N=9-11/group; Age=Day 1-Day 10; Tox Exp Tech=gavage; Tox Exp Dur=10 d; Tox Study Dur=10 d; Tox Stat Sig=Y

eq Hatchling; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=57465-28-8; TOX - Dose-Response Data Format=DR Table; N=24-26/treatment group; Age=hatching; Tox Exp Tech=egg injection; Tox Exp Dur=single dose at incubation day 6; Tox Study Dur=through incubation until hatch; Tox Stat Sig=Y; Malformations were observed in beak, liver/gall bladder, external yolk sac. EROD is ethoxyresorufin-o-deethylase.

er Hatchling; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=57465-28-8; TOX - Dose-Response Data Format=DR Table; N=24-26/treatment group; Age=hatching; Tox Exp Tech=egg injection; Tox Exp Dur=single dose at incubation day 6; Tox Study Dur=through incubation until hatch; Tox Stat Sig=Y; Hatch weight was not reduced in treated chicks.

es Hatchling; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=32598-13-3; TOX - Dose-Response Data Format=DR Table; N=24-26/treatment group; Age=hatching; Tox Exp Tech=egg injection; Tox Exp Dur=single dose at incubation day 6; Tox Study Dur=through incubation until hatch; Tox Stat Sig=Y

et Hatchling; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=32598-13-3; TOX - Dose-Response Data Format=DR Table; N=24-26/treatment group; Age=hatching; Tox Exp Tech=egg injection; Tox Exp Dur=single dose at incubation day 6; Tox Study Dur=through incubation until hatch; Tox Stat Sig=Y

eu Hatchling; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=32598-13-3; TOX - Dose-Response Data Format=DR Table; N=24-26/treatment group; Age=hatching; Tox Exp Tech=egg injection; Tox Exp Dur=single dose at incubation day 6; Tox Study Dur=through incubation until hatch; Tox Stat Sig=Y; Malformations were observed in beak, vertebrae, toes, intertarsal joint, feet, liver, external yolk sac. Microphthalmia observed. EROD is ethoxyresorufin-o-deethylase.

ev Adult; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=7723-14-0; N=4/group; Tox Exp Tech=diet; Tox Exp Dur=7 d; Tox Study Dur=7 d; Tox Stat Sig=Y; See figures in paper for phosphorus concentrations in skin and fat.

ew Adult; Lab; NR; Species - California (R)=*Falco sparverius*; TOX - Chemical=7723-14-0; N=4/group; Tox Exp Tech=diet; Tox Exp Dur=7 d; Tox Study Dur=7 d; Tox Stat Sig=NR

ex Species - California (R)=*Falco sparverius*; TOX - Chemical=1336-36-3; Citation contains references for multiple bird species.

ey Species - California (R)=*Falco sparverius*; TOX - Chemical=1336-36-3; Citation contains references for multiple bird species.

ez Species - California (R)=*Falco sparverius*; TOX - Chemical=1336-36-3; Citation contains references for multiple bird species.

fa Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=SELENIUM COMPOUNDS; N=10 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=77 d; Tox Study Dur=105 d; Tox Stat Sig=Y; Birds were fed mammals collected from a selenium contaminated site.

fb Adult; Lab; M; Species - California (R)=*Falco sparverius*; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=40 birds; Tox Exp Tech=diet; Tox Exp Dur=11 wks; Tox Study Dur=11 wks; Tox Stat Sig=Y

fc Adult; Lab; F; Species - California (R)=*Falco sparverius*; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=53 eggs; Tox Exp Tech=diet; Tox Exp Dur=11 wks; Tox Study Dur=11 wks; Tox Stat Sig=Y

fd Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=1464-42-2; N=9-10 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=77 d; Tox Study Dur=105 d; Tox Stat Sig=Y; See Table 2 for values of Se accumulation in blood and excreta over time.

fe Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=1464-42-2; N=9-10 pairs/group; Tox Exp Tech=diet; Tox Exp Dur=77 d; Tox Study Dur=105 d; Tox Stat Sig=Y

ff Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=1464-42-2; N=15 pairs/treatment group; 10 control pairs; Tox Exp Tech=diet; Tox Exp Dur=11 wks; Tox Study Dur=11 wks; Tox Stat Sig=Y

fg Adult; Juvenile; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15 pairs/treatment group; 10 control pairs; Tox Exp Tech=diet; Tox Exp Dur=11 wks; Tox Study Dur=11 wks; Tox Stat Sig=N; Chicks were fed clean diets after hatching.

fh Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15 pairs/treatment group; 10 control pairs; Tox Exp Tech=diet; Tox Exp Dur=11 wks; Tox Study Dur=11 wks; Tox Stat Sig=N

fi Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15 pairs/treatment group; 10 control pairs; Tox Exp Tech=diet; Tox Exp Dur=11 wks; Tox Study Dur=11 wks; Tox Stat Sig=N

fj Adult; Lab; B; Species - California (R)=*Falco sparverius*; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; N=15 pairs/treatment group; 10 control pairs; Tox Exp Tech=diet; Tox Exp Dur=11 wks; Tox Study Dur=11 wks; Tox Stat Sig=Y

fk Adult; Adult; Lab; Lab; B; Species - California (R)=*Falco sparverius*; Species - California (R)=*Falco sparverius*; TOX - Chemical=1464-42-2; TOX - Chemical=1464-42-2; TOX - Dose-Response Data Format=DR Table; TOX - Dose-Response Data Format=DR Table; N=15 pairs/treatment group; 10 control pairs; Tox Exp Tech=diet; Tox Exp Dur=11 wks; Tox Study Dur=11 wks; Tox Stat Sig=NR; Embryo deformities observed in control and 6 ppm Se groups were not attributed to selenium.

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